

Application Serial No.: 10/652,787  
Art Unit: 2176**REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed March 6, 2006. Claims 1-36 remain pending in the present application. Reconsideration and allowance of the application and pending claims are respectfully requested.

**Abstract**

The Office Action reminded the Applicants of the proper content and proper language and format for an abstract of the disclosure. Applicants respectfully submit that the abstract complies with these requirements.

**2. Response To Objections of the Claims**

Claims 1, 7-8, 11-12, 20-25, 28-30, 32, and 34-36 has been objected to because of the informalities of allegedly having misspelled words such as "minimizing," "optimizing," etc.

Applicants respectfully traverse the objection for at least the following reasons. MPEP § 608.01 states that "Examiners should not object to the specification and/or claims in patent applications merely because applicants are using British English spellings (e.g., colour) rather than American English spellings. It is not necessary to replace the British English spellings with the equivalent American English spellings in the U.S. patent applications. Note that 37 CFR 1.52(b)(1)(ii) only requires the application to be in the English language. There is no additional requirement that the English must be American English."

Since British English spellings are permissible, Applicant respectfully requests that the objection be withdrawn.

**3. Response To Rejections of Claims Under 35 U.S.C. § 103**

Claims 1-36 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Geigel* (EP 1220531A2) in view of *Wong* ("A New Algorithm for Floorplan Design"). It is well-established at law that, for a proper rejection of a claim under 35 U.S.C. § 103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. *See, e.g., In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

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a. Claim 1

As provided in independent claim 1, Applicants claim:

A method of composing a page, or a portion of a page, of a document, by a programmed processor comprises:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects;

*establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area;*

receiving and preparing for evaluation for the plurality of objects a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and

*finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process.*

(Emphasis added).

Applicants respectfully submit that independent claim 1 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" and "finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process," as recited and emphasized above in claim 1.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" and "finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process." This deficiency is acknowledged in the Office Action. The Office Action further states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI

design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* teaches an alternative approach to selecting image placement and provides no suggestion for using a slicing structure arrangement. Also, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest finding an arrangement having a minimized total cost by means of an iterative process. Therefore, it is not obvious to utilize a slicing structure arrangement from the field of integrated circuit design in methods and systems related to composing a page of a document.

As a result, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 1 should be withdrawn.

b. Claims 2-19

Because independent claim 1 is allowable over the cited art of record, dependent claims 2-5 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that dependent claims 2-19 contain all the steps and features of independent claim 1. For at least this reason, the rejections of claims 2-19 should be withdrawn.

c. Claim 20

As provided in independent claim 20, Applicants claim:

A data carrier having thereon a computer program adapted to program a processor of a computer system to carry out the following steps:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects;

*establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area;*

preparing for evaluation for the plurality of objects a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and

*finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process.*

(Emphasis added).

Applicants respectfully submit that independent claim 20 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" and "finding a slicing structure

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arrangement of the plurality of objects with a minimised total cost by means of an iterative process," as recited and emphasized above in claim 20.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered, and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" and "finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process." This deficiency is acknowledged in the Office Action. The Office Action further states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* teaches an alternative approach to selecting image placement and provides no suggestion for using a slicing structure arrangement. Also, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest finding an arrangement having a minimized total cost by means of an iterative process. Therefore, it is not obvious to utilize a slicing structure arrangement from the field of integrated circuit design in methods and systems related to composing a page of a document.

As a result, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 20 should be withdrawn.

d. Claim 21

As provided in independent claim 21, Applicants claim:

Computing apparatus comprising a processor programmed to carry out the following steps:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects;

*establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area;*

*preparing for evaluation for the plurality of objects a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and*

*finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process.*

(Emphasis added).

Applicants respectfully submit that independent claim 21 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" and "finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process," as recited and emphasized above in claim 21.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area" and "finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process." This deficiency is acknowledged in the Office Action. The Office Action further states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* teaches an alternative approach to selecting image placement and provides no suggestion for using a slicing structure arrangement. Also, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest finding an arrangement having a minimized total cost by means of an iterative process. Therefore, it is

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not obvious to utilize a slicing structure arrangement from the field of integrated circuit design in methods and systems related to composing a page of a document.

As a result, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 21 should be withdrawn.

e. Claim 22

As provided in independent claim 22, Applicants claim:

A method of composing a page, or a portion of a page, of a document, by a programmed processor comprising:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects;

*establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects;*

*minimising the function to find a minimised total area arrangement; and*

*fitting the minimised total area arrangement to the page.*

(Emphasis added).

Applicants respectfully submit that independent claim 22 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page," as recited and emphasized above in claim 22.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered, and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page." This deficiency is acknowledged in the Office Action. The Office Action further states that these features are disclosed in *Wong* and that it would

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have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page." Moreover, it is not obvious to utilize a VLSI approach from the field of integrated circuit design in methods and systems related to composing a page of a document.

As a result, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 22 should be withdrawn.

**f. Claims 23-27**

Because independent claim 22 is allowable over the cited art of record, dependent claims 23-27 (which depend from independent claim 22) are allowable as a matter of law for at least the reason that dependent claims 23-27 contain all the steps and features of independent claim 22. For at least this reason, the rejections of claims 23-27 should be withdrawn.

**g. Claim 28**

As provided in independent claim 28, Applicants claim:

A data carrier having thereon a computer program adapted to program a processor of a computer system to carry out the following steps:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects;

*establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects;*

*minimising the function to find a minimised total area arrangement;*

*and*

*fitting the minimised total area arrangement to the page.*

(Emphasis added).

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Applicants respectfully submit that independent claim 28 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page," as recited and emphasized above in claim 28.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered, and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page." This deficiency is acknowledged in the Office Action. However, the Office Action states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page." Moreover, it is not obvious to utilize a VLSI approach from the field of integrated circuit design in methods and systems related to composing a page of a document.

As a result, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 28 should be withdrawn.

h. Claim 29

As provided in independent claim 29, Applicants claim:

Computing apparatus comprising a processor programmed to carry out the following steps:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects;

*establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects;*

*minimising the function to find a minimised total area arrangement; and*

*fitting the minimised total area arrangement to the page.*

(Emphasis added).

Applicants respectfully submit that independent claim 29 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page," as recited and emphasized above in claim 29.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered, and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page." This deficiency is acknowledged in the Office Action. The Office Action further states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* discloses outputting image placement parameters that meet a desired threshold and

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does not suggest "establishing, for the plurality of objects, evaluation of a function to represent a total area of an arrangement of the plurality of objects; minimising the function to find a minimised total area arrangement; and fitting the minimised total area arrangement to the page." Moreover, it is not obvious to utilize a VLSI approach from the field of integrated circuit design in methods and systems related to composing a page of a document.

As a result, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 29 should be withdrawn.

i. Claim 30

As provided in independent claim 30, Applicants claim:

A method of providing a customised document having a plurality of pages, comprising:

receiving a plurality of selected objects for inclusion in the document from a database of two-dimensional objects and an assignation of each of the selected objects to one of a plurality of groups, and an assignation of each of the selected objects to one of the pages of the document;

*producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; and*

*arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function.*

(Emphasis added).

Applicants respectfully submit that independent claim 30 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; and arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function," as recited and emphasized above in claim 30.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered, and possible solutions are scored against different evaluation criteria and combined to form a final fitness

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store. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; [and] arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function." This deficiency is acknowledged in the Office Action. However, the Office Action states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; [and] arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function." Moreover, it is not obvious to utilize a VLSI approach from the field of integrated circuit design in methods and systems related to composing a page of a document.

Hence, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 30 should be withdrawn.

j. Claims 31-33

Because independent claim 30 is allowable over the cited art of record, dependent claims 31-33 (which depend from independent claim 30) are allowable as a matter of law for at least the reason that dependent claims 31-33 contain all the steps and features of independent claim 30. For at least this reason, the rejections of claims 31-33 should be withdrawn.

Application Serial No.: 10/652,787  
Art Unit: 2176k. Claim 34

As provided in independent claim 34, Applicants claim:

A data carrier having thereon a computer program adapted to program a processor of a computer system to carry out the following steps:

receiving a plurality of selected objects for inclusion in the document from a database of two-dimensional objects and an assignation of each of the selected objects to one of a plurality of groups, and an assignation of each of the selected objects to one of the pages of the document;

*producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; and*

*arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function.*

(Emphasis added).

Applicants respectfully submit that independent claim 34 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; and arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function," as recited and emphasized above in claim 34.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered, and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; [and] arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function." This deficiency is acknowledged in the Office Action. However, the Office Action states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

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With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; [and] arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function." Moreover, it is not obvious to utilize a VLSI approach from the field of integrated circuit design in methods and systems related to composing a page of a document.

Hence, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 34 should be withdrawn.

### 1. Claim 35

As provided in independent claim 35, Applicants claim:

Computing apparatus comprising a processor programmed to carry out the following steps:

receiving a plurality of selected objects for inclusion in the document from a database of two-dimensional objects and an assignation of each of the selected objects to one of a plurality of groups, and an assignation of each of the selected objects to one of the pages of the document;

*producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; and*

*arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function.*

(Emphasis added).

Applicants respectfully submit that independent claim 35 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; and arranging the objects assigned

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to the said one of the pages in an arrangement such as to minimise the function," as recited and emphasized above in claim 35.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered, and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; [and] arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function." This deficiency is acknowledged in the Office Action. However, the Office Action states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest "producing a function dependent on a total area of the arrangement and on proximity to each other of objects in the same group and for said one of the pages of the document establishing, for the objects assigned to that page, evaluation of the function; [and] arranging the objects assigned to the said one of the pages in an arrangement such as to minimise the function." Moreover, it is not obvious to utilize a VLSI approach from the field of integrated circuit design in methods and systems related to composing a page of a document.

Hence, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 35 should be withdrawn.

m. Claim 36

As provided in independent claim 36, Applicants claim:

A method of composing a page, or a portion of a page, of a document, comprising:

defining a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects;

*establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area;*

*establishing a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and*

*finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process.*

(Emphasis added).

Applicants respectfully submit that independent claim 36 is allowable for at least the reason that *Geigel* in view of *Wong* does not disclose, teach, or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area; establishing a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process," as recited and emphasized above in claim 36.

*Geigel* appears to teach at most a system for automatic creation of digital image albums. In this system, *Geigel* teaches "use of a tree structure as illustrated in Fig. 8" to represent a photo album. Para. 0038. Genetic algorithms are considered, and possible solutions are scored against different evaluation criteria and combined to form a final fitness score. Paras. 0052-0053. Image placement parameters are then outputted for a corresponding final fitness score that exceeds a threshold value. Para. 0011.

Thus, *Geigel* fails to teach or suggest at least "establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area; establishing a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process." This deficiency is acknowledged in the Office Action.

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However, the Office Action states that these features are disclosed in *Wong* and that it would have been obvious to combine the teachings of *Geigel* and *Wong*. Applicants respectfully disagree.

With regard to *Wong*, it teaches a design method for VLSI circuit layout. *Geigel*, on the other hand, provides no suggestion for adopting or incorporating approaches used in VLSI design, as taught in *Wong*, with the systems and methods being used in *Geigel*. Further, *Geigel* teaches an alternative approach to selecting image placement and provides no suggestion for using a slicing structure arrangement. Also, *Geigel* discloses outputting image placement parameters that meet a desired threshold and does not suggest finding an arrangement having a minimized total cost by means of an iterative process. Therefore, it is not obvious to utilize a slicing structure arrangement from the field of integrated circuit design in methods and systems related to composing a page of a document.

Hence, a *prima facie* case establishing an obviousness rejection by the proposed combination of *Geigel* with *Wong* has not been made. Therefore, the rejections of claim 36 should be withdrawn.

#### CONCLUSION

For at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,

  
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Charles W. Griggs, Reg. No. 47,283

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***AMENDMENTS TO THE ABSTRACT***

Please amend the Abstract as follows, a clean-copy replacement sheet having been attached hereto:

**Page Composition**

A page is composed by establishing an arrangement of objects to be fitted on to the page and then carrying out an iterative process to minimise a cost function dependent on properties of the arrangement. Computational advantages are obtained by describing such arrangements as slicing structures.

(Figure 16)

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